

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/DE 02/03782

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H02K41/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H02K B65G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

PAJ, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 1998, no. 06, 30 April 1998 (1998-04-30) -& JP 10 032973 A (AMADA CO LTD), 3 February 1998 (1998-02-03) abstract; figure 5	1,2,6
A	---	13-16
X	US 5 088 593 A (LEWIN HEINZ-ULRICH) 18 February 1992 (1992-02-18) abstract; figures 1,1A column 1, line 55 - line 64	1-4,6-9
X	PATENT ABSTRACTS OF JAPAN vol. 013, no. 473 (M-884), 26 October 1989 (1989-10-26) -& JP 01 186103 A (MITSUBISHI ELECTRIC CORP), 25 July 1989 (1989-07-25) abstract; figures 1-3	1,6

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

G document member of the same patent family

Date of the actual completion of the international search

6 June 2003

Date of mailing of the international search report

13/06/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Contreras Sampayo, J

INTERNATIONAL SEARCH REPORT

International Application No
PCT/DE 02/03782

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 198 37 212 A (ITEC GES FUER PROZESAUTOMATION) 24 February 2000 (2000-02-24) abstract; figures 2,4 column 4, line 21 - line 38	1,2,6
X	US 4 798 985 A (CHITAVAT ANWAR) 17 January 1989 (1989-01-17) column 6, line 13 - line 31; figures 1,2	1,2,6
A	US 5 778 758 A (CHRISTMANN MARTIN ET AL) 14 July 1998 (1998-07-14) abstract; figure 2 column 1, line 44 - line 57 column 2, line 58 - line 64	1,2
A	US 5 179 304 A (KENJO ATSUSHI ET AL) 12 January 1993 (1993-01-12) abstract; figure 6	13-16
A	US 6 271 606 B1 (HAZELTON ANDREW J) 7 August 2001 (2001-08-07) abstract; figures 2A,2B column 1, line 44 -column 2, line 48	1
A	US 3 954 037 A (RIOS GUILLERMO BAEZ) 4 May 1976 (1976-05-04) abstract; figures 1,2,6	1

INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No

PCT/DE 02/03782

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
JP 10032973	A	03-02-1998	NONE	
US 5088593	A	18-02-1992	AU 632624 B2	07-01-1993
			AU 6375290 A	09-05-1991
			DE 4033913 A1	02-05-1991
			US 5172803 A	22-12-1992
			ZA 9007711 A	29-01-1992
JP 01186103	A	25-07-1989	NONE	
DE 19837212	A	24-02-2000	DE 19837212 A1	24-02-2000
			DE 29815709 U1	28-01-1999
US 4798985	A	17-01-1989	NONE	
US 5778758	A	14-07-1998	DE 19605387 A1	28-08-1997
			AT 220768 T	15-08-2002
			DE 59707698 D1	22-08-2002
			EP 0790422 A1	20-08-1997
US 5179304	A	12-01-1993	JP 4087551 A	19-03-1992
US 6271606	B1	07-08-2001	NONE	
US 3954037	A	04-05-1976	BR 7604483 A	26-07-1977
			CA 1018436 A1	04-10-1977
			DE 2631022 A1	03-02-1977
			FI 762012 A	10-01-1977
			FR 2317060 A1	04-02-1977
			IT 1123009 B	30-04-1986
			SE 7606750 A	10-01-1977